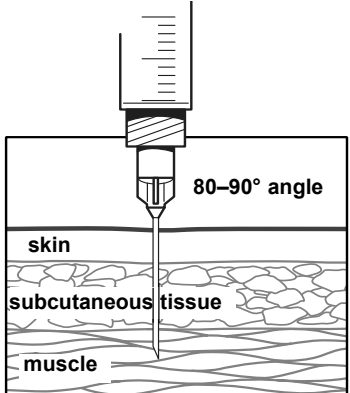



# How to Administer Intramuscular (IM) Injections

Administer these vaccines via intramuscular (IM) route: Diphtheria, tetanus (DT, Td) with pertussis (DTaP, Tdap); Hib; hepatitis A; hepatitis B; inactivated influenza; meningococcal conjugate (MCV4); and pneumococcal conjugate (PCV7). Administer inactivated polio (IPV) and pneumococcal polysaccharide (PPV23) either IM or SC.

Patient age	Site	Needle size	Needle insertion
Infants (birth to 12 mos. of age)	Vastus lateralis muscle in anterolateral aspect of middle or upper thigh	7/8" to 1" needle, 23–25 gauge	<p>Use a needle long enough to reach deep into the muscle.</p> <p>Insert needle at an 80–90° angle to the skin with a quick thrust.</p> <p>There are no data to document the necessity of aspiration.*</p> <p>Multiple injections given in the same extremity should be separated by a minimum of 1".</p> <p><small>*American Academy of Pediatrics. 2003 Red Book: Report of the Committee on Infectious Diseases: p.19.</small></p> 
Young children (12 to 36 mos. of age)	Vastus lateralis muscle preferred until deltoid muscle has developed adequate mass	7/8" to 1" needle, 23–25 gauge	
Older children (>36 mos. of age) and adults	Thickest portion of deltoid muscle—above level of armpit and below acromion	1" to 2" needle, 23–25 gauge	



**IM site for infants and young children in the anterolateral thigh**

vastus lateralis (shaded area)

IM injection site area

Insert needle at an 80–90° angle into vastus lateralis muscle in the anterolateral aspect of middle or upper thigh.

**IM site for older children and adults in the deltoid muscle**

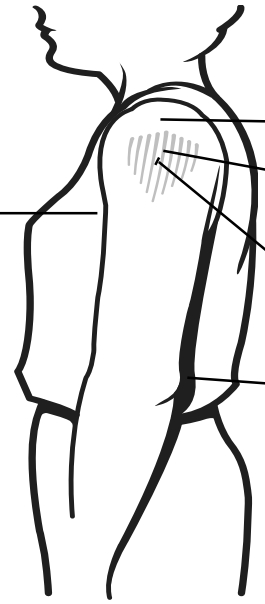
level of armpit

acromion

deltoid muscle (shaded area)

IM injection site

elbow



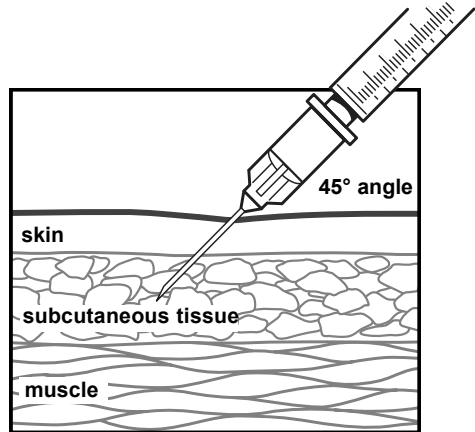
Insert needle at an 80–90° angle into densest portion of deltoid muscle—above the level of armpit and below the acromion.

Adapted by the Immunization Action Coalition courtesy of the Minnesota Department of Health

[www.immunize.org/catg.d/p2020.pdf](http://www.immunize.org/catg.d/p2020.pdf) • Item #P2020 (9/05)

# How to Administer Subcutaneous (SC) Injections

Administer these vaccines via subcutaneous (SC) route: MMR, varicella, meningococcal polysaccharide (MPSV4). Administer inactivated polio (IPV) and pneumococcal polysaccharide (PPV23) vaccines either SC or IM.

Patient age	Site	Needle size	Needle insertion
Infants (birth to 12 mos. of age)	Fatty area of the thigh	5/8" to 3/4" needle, 23–25 gauge	<p>Pinch up on SC tissue to prevent injection into muscle.</p> <p>Insert needle at 45° angle to the skin.</p> <p>There are no data to document the necessity of aspiration.*</p> <p>Multiple injections given in the same extremity should be separated by a minimum of 1".</p> <p><small>*American Academy of Pediatrics. 2003 Red Book: Report of the Committee on Infectious Diseases: p.19.</small></p> 
Young children (12 to 36 mos. of age)	Fatty area of the thigh or outer aspect of upper arm (see both illustrations below)	5/8" to 3/4" needle, 23–25 gauge	
Older children (>36 mos. of age) and adults	Outer aspect of upper arm	5/8" to 3/4" needle, 23–25 gauge	

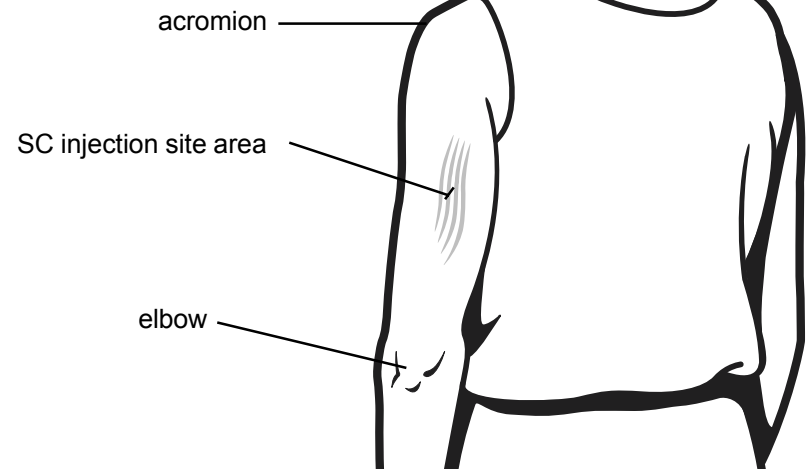


**SC site for infants and young children in the anterolateral thigh**

SC injection site area

Insert needle at a 45° angle into fatty area of anterolateral thigh. Make sure you pinch up on SC tissue to prevent injection into the muscle.

**SC site for young children and adults in the outer aspect of the upper arm**



Insert needle at a 45° angle into outer aspect of upper arm. Make sure you pinch up on the SC tissue to prevent injection into the muscle.

Adapted by the Immunization Action Coalition courtesy of the Minnesota Department of Health

[www.immunize.org/catg.d/p2020.pdf](http://www.immunize.org/catg.d/p2020.pdf) • Item #P2020 (9/05)